National Institute of Environmental Health Sciences

Public health consequences and cost of climate change impacts on indoor environments

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Abstract:

Prepared for the Indoor Environments Division, Office of Radiation and Indoor Air, U.S. Environmental Protection Agency. This paper accepts the conclusions of the world scientific community that the warming of the Earth over the past several decades has been caused largely by anthropogenic greenhouse gas emissions and that such emissions, if continued, will likely lead to a variety of climatic changes throughout the world. This is the general conclusion of the Intergovernmental Panel on Climate Change (IPCC) and the U.S. Climate Change Science Program (CCSP). The IPCC was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to present a clear scientific view on the current state of climate change and its potential consequences, while the CCSP is an organization of 13 federal agencies working to improve our understanding of the science of climate change and its potential impacts. These organizations provide up-to-date scientific information and reports on various aspects of climate change, along with major references to the general literature.The literature on the impact of climate change has focused almost exclusively on the outdoor environment. Girman et al. (2008), however, rightly point out that the impact of climate change on the indoor environment could also be substantial, and they identify several areas of concern such as greater use of air conditioning, increased risk of mold from flooding, increased exposure to ozone indoors, increased pressures to reduce ventilation rates, increased risk from vector-borne diseases and increased risk of pesticide exposure. They also suggest that government agencies and nonprofit organizations provide information and programs necessary to design, construct, maintain and operate indoor environments that are capable of protecting occupants from climate change impacts. This document expands and elaborates on the issues raised in that paper.

Source: http://www.epa.gov/iaq/pdfs/mudarri.pdf

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Indoor Environment, Meteorological Factors, Precipitation, Temperature

Air Pollution: Interaction with Temperature, Ozone

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Global or Unspecified

Health Impact: ☑

specification of health effect or disease related to climate change exposure

General Health Impact

Intervention: ☑

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Cost/Economic, Other Projection Model/Methodology

Other Projection Model/Methodology: discussion only

Resource Type: ☑

format or standard characteristic of resource

Review

Resilience: ☑

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content